

**IN THE CLAIMS:**

The following list of claims replaces all prior versions or claim lists.

Claim 1 (previously canceled).

Claim 2 (currently amended): A method comprising:

employing a ~~temporal~~ spreading code sequence for spreading at least one bit of information;  
said ~~temporal~~ sequence being selected from a set of sequences, wherein said sequence is changed at various intervals.

Claim 3 (previously presented): The method of claim 2, wherein said spreading is carried out by a receiver.

Claim 4 (previously presented): The method of claim 3, wherein said receiver is part of a communication network.

Claim 5 (previously presented): The method of claim 2, wherein said spreading is carried out by a transmitter.

Claim 6 (previously presented): The method of claim 5, wherein said transmitter is part of a communication network.

Claim 7 (previously presented): The method of claim 2, wherein a collection of bits of information including said at least one bit of information corresponds to a symbol.

Claim 8 (previously presented): The method of claim 7, wherein said symbol is represented using quadrature modulation.

Claim 9 (previously presented): The method of claim 8, wherein said quadrature modulation comprises phase-shift keyed modulation.

Claim 10 (currently amended): The method of claim 2, wherein said ~~temporal~~ sequence comprises a composite sequence.

Claim 11 (currently amended): An apparatus comprising: a unit;

said unit being adapted to employ a ~~temporal~~ code spreading sequence for spreading at least one bit of information; said ~~temporal~~ sequence being selected from a set of sequences, wherein said unit is further adapted to change said sequence at various intervals.

Claim 12 (previously presented): The apparatus of claim 11, wherein said unit is included in a receiver.

Claim 13 (previously presented): The apparatus of claim 12, wherein said receiver is part of a communication network.

Claim 14 (previously presented): The apparatus of claim 11, wherein said unit is included in a transmitter.

Claim 15 (previously presented): The apparatus of claim 14, wherein said transmitter is part of a communication network.

Claim 16 (previously presented): The apparatus of claim 11, wherein a collection of bits of information including said at least one bit of information corresponds to a symbol.

Claim 17 (previously presented): The apparatus of claim 16, wherein said unit is adapted to represent said symbol using quadrature modulation.

Claim 18 (previously presented): The apparatus of claim 17, wherein said quadrature modulation comprises phase-shift keyed modulation.

Claim 19 (currently amended): The apparatus of claim 11, wherein said unit is adapted to employ a ~~temporal~~ sequence comprisescomprising a composite sequence.

Claim 20 (currently amended): An apparatus comprising: a first unit and a second unit; at least one of said units comprising means to generate a ~~temporal~~ sequence of binary spreading codes, wherein said sequence is changed at various intervals.

Claim 21 (previously presented): The apparatus of claim 20, wherein said units are included in a receiver.

Claim 22 (previously presented): The apparatus of claim 21, wherein said receiver is part of a communication network.

Claim 23 (previously presented): The apparatus of claim 20, wherein said units are included in a transmitter.

Claim 24 (previously presented): The apparatus of claim 23, wherein said transmitter is part of a communication network.

Claim 25 (previously presented): The apparatus of claim 20, wherein a collection of bits corresponds to a symbol.

Claim 26 (previously presented): The apparatus of claim 25, wherein at least one of said units comprises means to represent said symbol using quadrature modulation.

Claim 27 (currently amended): The apparatus of claim 26, wherein said means to represent said symbol~~quadrature modulation~~ comprises means to represent said symbol using phase-shift keyed modulation.

Claim 28 (currently amended): The apparatus of claim 20, wherein said means to generate a ~~temporal~~ sequence comprises means to generate a composite sequence.

Claim 29 (currently amended): A set of signals comprising: communication signals having been generated by a method comprising:

employing a ~~temporal~~ spreading code sequence;

said ~~temporal~~ sequence being selected from a set of sequences, wherein said sequence is changed at various intervals.

Claim 30 (previously presented): The set of signals of claim 29, wherein said communication signals are received by a receiver.

Claim 31 (previously presented): The set of signals of claim 30, wherein said receiver is part of a communication network.

Claim 32 (previously presented): The set of signals of claim 29, wherein said communication signals are transmitted by a transmitter.

Claim 33 (previously presented): The set of signals of claim 32, wherein said transmitter is part of a communication network.

Claim 34 (currently amended): The set of signals of claim 29, wherein a collection of bits corresponds to a symbol.

Claim 35 (previously presented): The set of signals of claim 34, wherein said symbol is represented using quadrature modulation.

Claim 36 (previously presented): The set of signals of claim 35, wherein said quadrature modulation comprises phase-shift keyed modulation.

Claim 37 (currently amended): The set of signals of claim 29, wherein said ~~temporal~~ sequence comprises a composite sequence.

Claim 38 (previously presented): The method of claim 2, wherein different spreading code temporal sequences are used for multiple simultaneous transmissions employing the same carrier frequency.

Claim 39 (currently amended): The method of claim 2, wherein said ~~temporal~~ sequence comprises a unique sequence.

Claim 40 (new): The method of claim 2, wherein said sequence is changed periodically based at least in part on a symbol interval.

Claim 41 (new): The method of claim 2, wherein said sequence is changed independent of any periodicities.

Claim 42 (new): An assembly of simultaneously transmitted electromagnetic signals, said signals being related to each other in said assembly so as to communicate stored information to a receiver, said signals being generated by modulating selected subsets of a set of stored binary spreading-code sequences corresponding to nodes in a multi-node communication network onto a sinusoidal electromagnetic carrier, at least one subset of said set of binary spreading-code sequences containing more than one of said binary spreading-code sequences, each subset of said set of binary spreading-code sequences employing a corresponding portion of said information.

Claim 43 (new): An assembly of simultaneously transmitted electromagnetic signals, said signals being related to each other in said assembly so as to communicate stored information within a

transmitting node to a receiving node in a multi-mode communication network, said assembly of signals being produced by a process of:

- a) assigning blocks of bits employing said stored information to corresponding subsets of a set of stored binary spreading-code sequences corresponding to nodes in said multi-node communication network, at least one of said subsets of said set of binary spreading-code sequences containing more than one of said binary spreading-code sequences; and
- b) simultaneously transmitting selected subsets of said set of stored binary spreading-code sequences from said transmitting node to said receiving node.

Claim 44 (new): An assembly of electromagnetic signals, said signals being related to each other in said assembly so as to communicate stored information within a transmitting node to a particular receiving node of a multi-node communication network, said assembly of signals being produced by a process of:

- a) generating a set of stored binary spreading-code sequences by combining a first group of stored data with a second group of stored data, said set of stored binary spreading-code sequences containing more than one binary spreading-code sequence;
- b) assigning blocks of bits embodying said stored information to corresponding subsets of said set of stored binary spreading-code sequences, each of said subsets of said set of binary spreading-code sequences containing at least one of said stored binary spreading-code sequences; and
- c) transmitting selected subsets of said set of binary spreading-code sequences from said transmitting node to said receiving node.

Claim 45 (new): The assembly of signals of claim 42 wherein said set of stored binary spreading-code sequences comprises combined contents of specified stages of a first binary shift register and second binary shift register.

Claim 46 (new): The assembly of signals of claim 42 wherein said set of stored binary spreading-code sequences comprises combined contents of specified stages stored within at least one random access memory module.

Claim 47 (new): The assembly of signals of claim 42 wherein each of said selected subsets of said set of stored binary spreading-code sequences comprises two binary spreading-code sequences.

Claim 48 (new): The assembly of signals of claim 47 wherein the two binary sequences comprising each of said selected subsets are transmitted simultaneously by modulating a first binary sequence onto a first sinusoidal electromagnetic carrier signal, and by modulating a second binary sequence onto a second sinusoidal electromagnetic carrier signal, said first and second carrier signals having the same frequency but being out of phase with each other.

Claim 49 (new): The assembly of signals of claim 2 wherein each of said selected subsets of said set of stored binary spreading-code sequences comprises three binary spreading-code sequences.

Claim 50 (new): The assembly of signals of claim 49 wherein the three stored binary sequences comprising each of said selected subsets are transmitted simultaneously by modulating a first binary sequence onto a first sinusoidal electromagnetic carrier signal, by modulating a second binary sequence onto a second sinusoidal electromagnetic carrier signal, and by modulating a third binary sequence onto a third sinusoidal electromagnetic carrier signal, said first, second and third carrier signals having the same frequency by being out of phase with each other.

Claim 51 (new): The assembly of signals of claim 42 wherein each of said selected subsets of said set of stored binary spreading-code sequences comprises four binary spreading-code sequences.

Claim 52 (new): The assembly of signals of claim 51 wherein the four stored binary sequences comprising each of said selected subsets are transmitted simultaneously by modulating a first binary sequence onto a first sinusoidal electromagnetic carrier signal, by modulating a second binary sequence onto a second sinusoidal electromagnetic carrier signal, by modulating a third binary sequence onto a third sinusoidal electromagnetic carrier signal, and by modulating a fourth binary sequence onto a fourth sinusoidal electromagnetic carrier signal, said first, second, third, and fourth carrier signals having the same frequency but being out of phase with each other.

Claim 53 (new): The assembly of signals of claim 43 wherein said stored binary spreading-code sequences are generated by combining contents of specified stages of a first binary shift register with contents of specified stages of a second binary shift register.

Claim 54 (new): The assembly of signals of claim 43 wherein said stored binary spreading-code sequences are generated by combining contents of specified stages within a random access memory module.

Claim 55 (new): The assembly of signals of claim 43 wherein all of said blocks of bits embodying said stored information are of equal fixed length.

Claim 56 (new): The assembly of signals of claim 44 wherein, when at least one subset of said set of stored binary spreading-code sequences comprises more than one sequence:

- a) each of said subsets of said set of binary sequences received at said particular receiving node is correlated with each binary sequence of said set of binary sequences so as to produce a set of correlation outputs, each correlation output corresponding to a specified one of said binary sequences, and
- b) said set of correlation outputs is evaluated to identify a particular one of said subsets of said set of binary sequences as being most likely to have been transmitted from said transmitting node to said particular receiving node.

Claim 57 (new): The assembly of signals of claim 46 wherein each of said selected subsets of said set of stored binary spreading-code sequences comprises two binary spreading-code sequences.

Claim 58 (new): The assembly of signals of claim 46 wherein each of said selected subsets of said set of stored binary spreading-code sequences comprises three binary spreading-code sequences.

Claim 59 (new): The assembly of signals of claim 46 wherein each of said selected subsets of said set of stored binary spreading-code sequences comprises four binary spreading-code sequences.